

the geometry is roughly the same. With the driver 12 inches farther forward, the front arm of the suspension works more. Therefore, engineers lightened the rear arm spring rates. Also, the tunnel ends short of its normal position, and a pivoting close-off panel connects to the rear idler wheels. As the suspension drops out, the area pivots down.

The new REV can also be converted for a passenger. Dubbed the "1 + 1" configuration, an optional clip-on passenger seat clips on to the back of the standard seat, which covers the oversized trunk.

Gone are Ski-Doo's hard-to-reach hand and thumb warmer controls, previously located under and behind the handlebars. They're now located on the left handlebar control block. A quick flick of the left thumb is all it takes to switch the controls. New gauges include an electronic hour meter and odometer.

Also, the unique design includes two large side panels that offer access to the engine compartment. They also remove for better access to the clutches, chaincase and other mechanical parts. The air intake incorporates into the left side panel.

The hood is a small panel that allows access to the single pipe. The two side panels and hood sculpt around the engine and mechanical parts, giving the sled a racy profile.

#### *In The Real World*

Climbing on the REV, drivers notice the new layout and ergonomics immediately. With the shift forward and knees at a 90-degree angle it takes some time

to get accustomed to the new position.

Drivers quickly learn that simply leaning out when bolting around corners is not the most efficient. Not in this setup. On the REV, leaning forward and out is the way to go. It takes a few turns to get this down, but once in the groove, it's second nature and feels more natural.

Standing to absorb the bumps on the trail takes little effort. It's as simple as standing up from sitting in a chair. Thigh muscles do all the work: Drivers will feel it after the ride. But bodies will adjust to the new way of riding.

#### *More For The Making*

The MX Z REV 600 also gets a new engine: a 600 H.O. It has the bottom end of Ski-Doo's 700 and 800 twins, with a new top end that includes eight-petal reeds and new exhaust porting. From our brief experience with the new

engine, the spot on power delivers all the way through the power range.

For those who want to get a taste of the REV platform, it will be available for the 2003 model year on Ski-Doo MX Z 800s and 600s in the spring-order X and full-build Sport packages.

The REV isn't the only thing new from Ski-Doo in '03. The company unveiled a new semi-direct injection engine with a knock sensor and electronically controlled variable exhaust, which will be available on the Legend SE and Grand Touring 800 SE. Other new goodies include the V-1000 four-stroke engine, an 800 H.O. engine, a 550 fan, a 159-inch track on the Summit line, an SC-10 III 136 inch suspension on select models and an Auto-Air suspension on the Grand Touring SE package.

The new shock automatically adjusts pre-load by an integrated mechanical hydraulic pump.



SKI-DOO LEGEND 600



SKI-DOO GRAND TOURING 800 SE



SKI-DOO MX Z 600 ADRENALINE

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**2003 SKI-DOO**



## **Let The Revolution Begin**

*REV-Chassis Machines Changes, Ride Style.*

Thinking inside the box was thrown out the window when Ski-Doo engineers sat down to draw up the latest creation from the Valcourt, Quebec, manufacturer — the MX Z REV. When officials unveiled the new REV (for Revolution) platform, we took notice.

The new REV is different in a good way. It changes the way a driver sits, leans and rides a snowmobile. Everything conventional about snowmobile ergonomics was re-thought and reworked into a nifty package. The new design moves most of the weight toward the machine's center of gravity, which

offers better handling characteristics. It also moves riders 12 inches farther forward than traditional snowmobile configurations, and the driver's knees bend at a 90-degree angle. The design allows a driver to stand easier when encountering nasty bumps on the trail.

The shift in driver position was a part of a whole chassis redesign. It began about five years ago when some Ski-Doo engineers started talking about how differently they sat on a snowmobile compared to a motorcycle. The discussion snow-balled from there. They set goals that included better ergonom-

ics; more chassis rigidity; more mass centralization; a new front suspension; easier access to mechanical parts; and weight reduction and met them straight on.

### **Where Go Thy Ergo?**

When designing the REV, Ski-Doo engineers looked at everything — and we mean everything. From the gauges to the hand and thumb warmer controls to the front suspension, nothing was overlooked.

The whole REV package is compact, with the weight centered on the sled. About 80 percent of the sled's weight is within 1 foot of the drive axle. It begins with a "pyramidal" chassis, with frame members that resemble a pyramid. The design is stronger and lighter than the ZX chassis. Ski-Doo claims the MX Z REV with an 800cc twin engine weighs 454 pounds, 20 pounds lighter than the 800 in the ZX chassis.

The new chassis design allowed engineers to move the engine back 2.6 inches and down 1.25 inches compared to the ZX chassis. The steering post is now above the engine rather than under and behind it.

The REV also incorporates a new A-arm front suspension design. The suspension is called the Response Angle Suspension (RAS). The front shock towers bolt to the pyramidal frame, which allows the shocks to communicate with the chassis. When the front absorbs a bump, the energy transfers through the suspension and into the chassis.

The SC-10 III rear skid soaks up the bumps in back with 14.5 inches of travel. Introduced in the 2002 model year,

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SKI-DOO MXZ 800 REV



SKI-DOO SUMMIT 800